

REMARKS

Claims 1-10 remain pending in connection with the present application, and claims 11-31 have been added by way of this Amendment. Claims 1, 11 and 22 are independent claims.

PRIOR ART REJECTIONS

The Examiner has rejected claims 1-10 under 35 U.S.C. §103 as being unpatentable over Meyers (U.S. Patent No. 4,143,776) in view of Nakatani (U.S. Patent No. 5,586,387) and further in view of Bond (U.S. Patent No. 4,915,565). This rejection is respectfully traversed.

Limitations of Claim 1 Are Lacking

Meyers discloses a turnover mechanism which picks up a rod and places the turned over rod in a trailing fixture. As shown in Fig. 1, a first holder (110) and a second holder (111) each have a pair of jaws pivotally mounted to open and close. The turnover mechanism, as described by Meyers, makes use of a head-keyed to shaft to rotate the rods. The shaft, head, and holders are rotated through an arc of 180 degrees about the axis of the shaft.

As such, Meyers teaches a basic turnover mechanism. ***However, taken singly or in combination with the other references, it has nothing to do with any turning device as claimed in claim 1.***

Claim 1 is directed to a device with a movable placement head and with a turning device, wherein the turning device is for taking one of the flip chips in a first holding station of the grippers (of the moveable placement head) and

after turning the chip, for returning the turned chip to one of the grippers in one of the downstream holding stations (of the moveable placement head). Thus, it is not directed to a turning device, per se, but is instead directed to a turning device interrelated with a moveable placement head. At least such a turning device as set forth in claim 1 is not taught or suggested by Meyers, taken alone or in combination with the other references.

There is further no teaching or suggestion of incorporating the turnover mechanism of Meyers into any device with a moveable head (see lack of motivation section discussed below). In essence, even assuming arguendo that Meyers could be combined with Nakatami or Bond, which Applicants do not admit, neither Nakatami or Bond would make up for the deficiencies of Meyers.

Nakatami is directed to an automated part assembly machine including two separate robots, each having an end-effector movable around within an individual work region. As shown in Fig. 17, operator hands (40D) may reverse the attitude or orientation of a part when exchanging a part from one robot arm to another robot arm. Bond is directed to an apparatus for inverting and handling an integrated circuit dice employing rotating apparatus for rotating a chip carrier by 180 degrees. Specifically with respect to Fig. 8A, a "die" knocked off a wafer falls a short distance onto tube (8-12) extending upward from housing (8-14) supported by rotating cylinder (8-40) and is held by a vacuum. Tube (8-12) moves up and down and rotates 180 degrees thereby placing a "die" on a substrate. **Neither, however, has anything to do with a device including a turning device** for taking one of the flip chips in a first

holding station of the grippers (of the moveable placement head) and after turning the chip, for returning the turned chip to one of the grippers in one of the downstream holding stations (of the moveable placement head), as set forth in claim 1.

The Examiner has acknowledged that Meyers fails to teach two holders that are suction pipettes and can be pivoted into a mutual transfer position, the holders, the clearance between the holders directly oppositely facing each other, in line with each other in the transfer position is somewhat larger than the thickness of the flip chips, and the movable placement head mounts components on a substrate, and has relied upon Nakatami and Bond for teaching these limitations of claim 1. **However, Meyers further lacks any teaching or suggestion of the turning device as claimed in claim 1**, for taking one of the flip chips in a first holding station of the grippers (of the moveable placement head) and after turning the chip, for returning the turned chip to one of the grippers in one of the downstream holding stations (of the moveable placement head). Neither Nakatami nor Bond makes up for this limitation, nor suggests incorporating any type of turning device therein. Thus, the alleged reference combination lacks at least such a feature and thus fails to render claim 1 obvious.

Specifically, the Examiner has only relied upon Nakatami to make up for the deficiency of "two holders can be pivoted into a mutual transfer position, the holders, the clearance between the holders directed oppositely facing each other, in line with each other in the transfer position is somewhat larger than

the thickness of the flip chips," and on Bond to make up the deficiency of "suction pipettes and mounting components on substrate." However, because all the patent documents fail to teach or suggest at least the turning device as claimed in claim 1, Applicants contend that the Examiner has failed to establish a proper *prima facie* case of obviousness under 35 U.S.C. §103(a). Thus, withdraw of the rejection is requested

Lack of Motivation to Combine Reference Teachings

Applicants further submit that the Examiner has not supplied evidence of the necessary motivation needed to lead one of ordinary skill in the art to combine the teachings of Meyers (U.S. Patent No. 4,143,776), Nakatami (U.S. Patent No. 5,586,387) and/or Bond (U.S. Patent No. 4,915,565). Accordingly, absent such motivation, a *prima facie* case of obviousness under 35 U.S.C. §103(a) has not been established and the rejection must be withdrawn.

Applicants direct the Examiner's attention to two recent cases decided by the Court of Appeals for the Federal Circuit (CAFC), In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed.Cir. 1999) and In re Kotzab, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed.Cir. 2000). Both of these cases set forth very rigorous requirements for establishing a *prima facie* case of obviousness under 35 U.S.C. §103(a). To establish obviousness based on a combination of elements disclosed in the prior art, there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by the Applicants. The motivation suggestion or teaching may come explicitly from one of the following:

- (a) the statements in the prior art (patents themselves)
- (b) the knowledge of one of ordinary skill art, or in some cases,
- (c) the nature of the problem to be solved.

See Dembiczak 50 USPQ at 1614 (Fed.Cir. 1999).

In order to establish a prima facie case of obviousness under 35 U.S.C. §103(a), the Examiner must provide particular findings as to why the two pieces of prior art are combinable. See Dembiczak 50 USPQ2d at 1617. Broad conclusory statements standing alone are not "evidence".

The alleged motivation for combining Meyers with Nakatami and/or Bond to reject claims 1 – 10, asserted by the Examiner, is: "for the purpose of flipping components without requiring lifting up the grippers to provide clearance and speeding up the mounting process by reducing the number of movable parts from the placement head." Such alleged **motivation is not present in any of the references** and has merely been alleged by the Examiner based upon Applicants invention, in hindsight.

Specifically, the alleged motivation of "for the purpose of flipping components without requiring lifting up the grippers to provide clearance and speeding up the mounting process by reducing the number of movable parts from the placement head," as cited by the Examiner on page 3 of the outstanding Office Action, makes use of impermissible hindsight reconstruction. The Examiner has used the present application as a blueprint, selected a prior art method relating to production plants, and then searched other prior art for the missing elements without identifying or discussing **any specific evidence of motivation to combine**, other than providing conclusory

statements regarding the knowledge in the art, motivation and obviousness.

Only Applicants teach combining a moveble head with a chip turning device, not any of the prior art set forth by the Examiner.

Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight. Dembiczak, 50 USPQ2d at 1617. Accordingly, Applicants respectfully submit that the claims are allowable for at least this additional reason.

Furthermore, the Examiner has not provided the requisite evidence to support his allegation that there is motivation to combine Meyers, Nakatami and Bond, so as to render obvious that which Applicants have described. The Examiner has not provided any showing of a suggestion, teaching or motivation to combine the prior art references to reject the claims in the present application, which is an essential component of an obviousness holding. The Examiner must explain the ***reasons why*** one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious (In re Fritch, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) the examiner can satisfy the burden of showing obviousness of the combination "only by showing ***some objective teaching in the prior art or that knowledge generally available*** to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references"). Thus, the Examiner has not adequately provided a proper combination of Meyers, Nakatami and Bond to render claim 1 obvious.

Relying on common knowledge or common sense of a person of ordinary skill in the art without any specific hint or suggestion of this in a particular reference is not a proper standard for reaching the conclusion of obviousness. See *In re Sang Lee*, 61 USPQ 2d 1430 (Fed. Cir. 2002). Further, relying on obvious design choice as a reason for combining teachings of the various references is again not the proper standard for obviousness. ***If the Examiner is relying on personal knowledge to support a finding of what is known in the art, the Examiner must provide an Affidavit or Declaration*** setting forth specific factual statements and explanation to support the finding. See 37 CFR 1.104(d)(2) and MPEP 2144.03(c). Accordingly, Applicants respectfully challenge the Examiner's alleged motivation and respectfully require the Examiner to withdraw the rejection or provide an Affidavit or Declaration as set forth above if the rejection is to be maintained.

NEW CLAIMS

Applicants have added new claims 11-31 by the present Amendment, which are also believed to be patentable over the prior art of record. Although somewhat similar arguments to those emphasized above may apply with regard to each of independent claims 11 and 22, each of the claims should be governed solely by the limitations present therein and should not be limited in any way by limitations or arguments set forth in independent claim 1. Accordingly, allowance of each of new claims 11-31 is respectfully requested.

CONCLUSION

In view of above remarks, reconsideration and withdrawal of the outstanding rejection and allowance of all pending claims is respectfully requested.

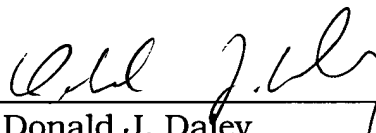
If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Andrew M. Waxman, Reg. No. 56,007, at the number of the undersigned listed below.

Pursuant to 37 C.F.R. 1.17 and 1.136(a), the Applicants respectfully petition for a two (2) month extension of time for filing a response in connection with the present application, and the required fee of \$420.00 is attached.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Very truly yours,

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